

USING TURBOSWAP FOR SURFACE WATER SOURCES

The latest TurboSWAP version (1.3.1 dated Dec. 17, 2002) includes procedures for doing assessments for surface water sources. The procedures are similar to groundwater, but have several key differences, which are described below.

1. Obtain and review a copy of the guidance document

“DRINKING WATER SOURCE ASSESSMENTS FOR SURFACE WATER SOURCES - AUGUST 18, 2000.” This document is posted on the DHS website:

<http://www.dhs.ca.gov/ps/ddwem/dwsap/SW/SWindex.htm>

2. Download, print, and complete necessary forms that are NOT part of TurboSWAP.

The Surface Water Source Data Sheet and the Surface Water Physical Barrier Effectiveness checklist are available from the UCD website: <http://swap.ice.ucdavis.edu/instructions/turbo-main.html>. To download a form, right click on the link for the form, and select “save target as” from the pop-up menu. Then specify a location on your computer to save the form.

NOTE: All surface water sources should have LOW PBE!

3. Download and print surface water maps.

These are available for most surface water sources that have been GPS'd. They are available at the UCD website: <http://swap.ice.ucdavis.edu/>. Choose the “Surface Protection Zone Static Maps” link and enter the same username and password that you use for the delineation mapping tool.

Each surface water source has two maps: “Watershed Schematic” which shows the entire watershed, and “Intake Zone” which displays a 2,500' diameter zone around the intake on a USGS quad map. Save both of these maps to your computer.

Check if the maps look ok. If the maps are not ok (i.e., the watershed is a small area when you expect a large one, or the source location is not correct) send an e-mail message to Mike Byrne at msbyrne@ucdavis.edu. Make sure to give the system number, source number, and the nature of the problem.

Optional: If another map is available (such as a map from a watershed sanitary survey report), create an electronic file (jpg image) by scanning the map or other means.

4. Determine the delineation method

There are two methods available:

- a. Without Zones: With this method, the entire watershed is considered to be in Zone A. This method is acceptable if the watershed is very small (approximately equivalent to the 2,500' diameter circle around the intake).
- b. With Zones: This method is recommended for most sources. Recommended zones (read the guidance!):
 - Zone A = areas within 400' of a reservoir or primary river or stream channel, and areas within 200' of tributaries

- Zone B = area within 2,500' diameter of the intake, not including areas within Zone A
- Watershed = remainder of watershed not in Zones A or B

5. Gather other data necessary for the assessment

- Identify the PCAs of primary concern.
- Identify PCAs that are located within zones (for Zone A, you are primarily looking for PCAs that occur in or directly discharge to the reservoir, river, stream, or tributary).
- Certain PCAs are specific to surface water:
 - Aquatic animal production (fish farms)
 - Snow ski areas
 - Recent burn areas

6. Enter data into TurboSWAP

Notes:

- Delineation: Instead of calculations, the user enters a narrative description of watershed and size and location of zones.
- Physical Barrier Effectiveness: Enter the result from the PBE checklist (all surface water sources should have LOW PBE!)
- PCA inventory: Remember to identify PCAs associated with detected contaminants
- Vulnerability and Assessment summary: Remember to use the Comments section to describe unusual procedures or results

7. Submit assessment

- You don't need to attach maps from the UCD website (we already have these maps)
- Optional: Attach other maps if available (as jpg images)

8. File the source data sheets in the DHS or LPA water system file.